

REMARKS

In accordance with the foregoing, claim 12-31 have been amended. Claims 12-31 are pending and under consideration.

In item 2, the Examiner raises various objections to the claims in an indefiniteness rejection. The claims have been amended to address these objections. For claims 12, 24, 29 and 31, "the program" has been changed to --the control program--. For claim 21, "the program" was not found. Otherwise, it is believed to be substantially self-explanatory with regard to how the Examiner's objections have been addressed. In view of the claim changes, it is submitted that the rejection should be withdrawn.

Claims 12-31 are rejected for obviousness-type double patenting over claims 1-12 of U.S. Patent No. 6,263,487 ("the '487 patent"). However, there are substantial differences between claims 12-31 of the present application and claims 1-12 of the '487 patent. For example, independent claim 12 of the present application recites:

Programmable controller to which software function blocks of a control program can be sent, the control program being processed by the programmable controller cyclically and/or with interrupt control during control operation, the software function blocks being designed to be loadable and capable of being tied into the control program while it is running, wherein

the software function blocks are designed to be object-oriented to have software function block objects and designed to be loadable into the programmable controller over the Internet and an Internet communication interface of the programmable controller, and

the programmable controller has a software function block execution system for tie-in of the software function block objects and for processing the control program.

On the other hand, independent claim 1 of the '487 patent recites:

A programmable controller, comprising:

an Internet communication interface receiving software function blocks of a control program, the software function blocks being loadable by the programmable controller and capable of being tied to the control program while the control program is being executed by the programmable controller, the control program having a control operation and being processed by the programmable controller at least one of cyclically and via interrupt control; and

a software function block execution system including an exe engine object, a watchdog object, a bootstrap object, and an input/output module object, the software function block execution system storing process image inputs and process image outputs, receiving signal states from process inputs, and sending the signal states to process outputs, the bootstrap

object generating software function block objects and the input/output module object before a start of the control operation, wherein if the control program is processed cyclically, the bootstrap object sends to the exe engine object a list of the software function block objects to be processed, and wherein if the control program is processed via interrupt control, the bootstrap object sends to the exe engine object a list of the software function block objects to be processed for each of the process inputs, and wherein at the start of the control operation, the bootstrap object starts the exe engine object, the exe engine starting the watchdog object, the watchdog object resetting the exe engine object when a cycle time is exceeded, the exe engine object cyclically i) updates the process image inputs, ii) if the control program is processed cyclically, processes one processing step of the software function block objects, iii) if the control program is processed via interrupt control, determines changes in the signal states at the process inputs and processes the software function block objects assigned to the process inputs, and iv) updates the process image outputs.

The Examiner is requested to consider the differences between the claims and withdrawal the rejection.

The Examiner indicates that claims 12-31 contain allowable subject matter. In view of the Examiner's indication of allowability and the amendments and remarks presented above, it is submitted that the application is in condition for allowance. An early action to that effect is courteously solicited.

Finally, if there are any formal matters remaining after this response, the Examiner is requested to telephone the undersigned to attend to these matters.

If there are any additional fees associated with filing of this Amendment, please charge the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: Aug. 13, 2004

By: Mark J. Henry
Mark J. Henry
Registration No. 36,162

1201 New York Avenue, NW, Suite 700
Washington, D.C. 20005
Telephone: (202) 434-1500
Facsimile: (202) 434-1501